REMARKS

Claims 1, 2, 4-10 and 16-20 stand finally rejected. Review and reconsideration on the merits are requested.

Claim 9 has been corrected to depend from claim 1. Entry of the amendment is respectfully requested as correcting an inadvertent error and not requiring any further search and/or consideration.

In response to the Examiner's request for cancellation of non-elected claim 15, Applicants respond as follows.

Withdrawn method claim 15 includes all of the limitations of product claim 1. Therefore, method claim 15 is eligible for rejoinder pursuant to MPEP § 821.04 (upon allowance of claim 1), and there is no need to cancel claim 15. This is discussed in MPEP § 821.01, bridging the left- and right-hand columns at page 800-63 (REV. 5, Aug. 2006).

In response to the objection to claim 10 as not further limiting the subject matter of claim 8 from which it depends, Applicants respond as follows.

Claim 7 depending from claim 1 recites that a surface of the conductor layer is subjected to a plating treatment. On the other hand, claim 10 depending from claim 8, which in turn depends from claim 1 also recites that a surface of the conductor layer is subjected to a plating treatment. Claim 10 is of narrower scope than claim 7 because it includes the limitations of claim 8.

Withdrawal of the foregoing objections is respectfully requested.

Claims 1, 2, 4, 6-10 and 16-20 were rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,296,189 to

Kang et al. Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kang et al.

Kang et al. was cited as disclosing a conductive composition comprising copper particles and alumina particles, which composition is formed into a conductive paste and screen-printed onto a ceramic substrate to form a printed circuit board. The conductive composition is said to comprise copper particles and alumina particles having a size of from about 0.05 to about 0.1 μm (from about 50 to 100 nm). Kang et al. was further cited as disclosing that other inorganic materials such as TiO_2 or SiO_2 are feasible (as retardants) and have the same function as the alumina particles, citing column 4, lines 30-39.

Although acknowledging that Kang et al. does not specifically teach a conductive composition having SiO_2 and ceramic particles, the Examiner was of the view that because Kang et al. is said to show that TiO_2 and SiO_2 have the same function as alumina, choosing two or more of these sintering retardant materials "is conventional in the art."

Applicants respond as follows.

The present claims are patentable because SiO_2 has a significantly different function from that of Al_2O_3, as explained below.

As discussed at the paragraph bridging pages 6-7 and the paragraph bridging pages 20-21 of the specification:

> The SiO_2 fine particle provides an operational effect of, in the debindering process performed in a temperature region lower than the firing temperature, heightening a temperature of the firing initiation of copper powder not to advance the densification and facilitating the escaping of organic components and also provides an operational effect of approximating the sintering initiation temperature of copper powder to the sintering initiation temperature of ceramic green sheet. On the contrary, in the subsequent firing process at a high temperature, the sintering of

copper powder is accelerated to form a dense sintered body due to exposure to wet nitrogen in the debindering step and this provides an operational effect that the generation of warping or waving of the ceramic substrate is prevented.

In contrast, as seen from the comparison between Example 2-A in which Al_2O_3 particles were added and Example 1-D of the present specification, when Al_2O_3 was used instead of SiO_2, the waving amount and resistivity thus obtained were substantially larger, as shown in Table 1 of the specification at page 24. The subject test data is reproduced in part, as follows.

Table 1

		Particle Size of Cu	Additive (1)			Waving Amount	Resistivity
			Additive	Particle Size of Additive (nm)	Amount of Additive Added (parts by mass)		
Example	**1-D**	**4.7**	**SiO_2**	**12**	**1.0**	**-0.01**	**2.5**
Comparative Example	**2-A**	**4.7**	**Al_2O_3**	**13**	**1.0**	**1.02**	**4.4**

Furthermore, the reference test described at pages 34 and 35 of the present specification shows that when the conductor part of a wiring board produced was observed by SEM (scanning-type electronic microscope), the conductor part of Example 1-D to which SiO_2 was added was densified as compared with Example 2-A to which Al_2O_3 was added. Applicants consider that differing from SiO_2, Al_2O_3 merely inhibits the sintering of Cu so as to make structure coarse, and therefore, the resistivity is made larger.

In view of the above, Applicants respectfully disagree that SiO_2 has the same function as alumina, such that Kang et al would not lead one of ordinary skill to substitute SiO_2 particles having an average particle size of 40 nm or less (as claimed) for the alumina particles of Kang et al having a size of from about 0.05 to about 0.1 μm (from about 50 to 100 nm) *with a reasonable*

expectation of success. Namely, as shown by the test data and difference in densification, SiO_2 and alumina do not have the same function and are not so easily substituted in a copper paste for a wiring board.

Moreover, as acknowledged by the Examiner, Kang et al does not specifically teach a conductive composition containing SiO_2 and ceramic particles. Therefore, claims 1, 2, 4, 6-10 and 16-20 are not anticipated by Kang et al.

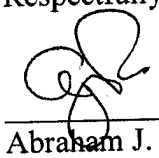
For the above reasons, it is respectfully submitted that the present claims are neither anticipated nor obvious over Kang et al and withdrawal of the foregoing rejection is respectfully requested.

Withdrawal of all rejections, rejoinder of withdrawn method claim 15 and allowance of claims 1, 2, 4-10 and 15-20 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Abraham J. Rosner
Registration No. 33,276

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860
WASHINGTON DC SUGHRUE/265550
65565
CUSTOMER NUMBER

Date: June 3, 2008